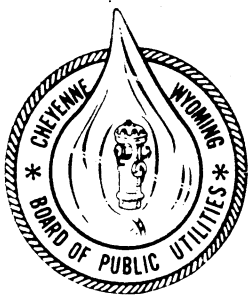


US EPA ARCHIVE DOCUMENT



Board of Public Utilities

Cheyenne Water and Sewer Departments

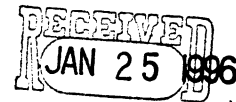
P.O. Box 1469
2100 Pioneer Avenue

Cheyenne, Wyoming 82003

Phone (307) 637-6460

January 19, 1996

Regulatory Reinvention Pilot Projects
XL Community Pilot Program
Water Docket, Mail Code 4101
U.S. EPA
401 M Street, S.W.
Washington, DC 20460



Re: Proposal for EPA's XL Community Pilot Program

Dear Sir/Madame:

Pursuant to the latest EPA XL Communities Federal Register Notice, we have revised our original XL program submission (See submission and cover letter dated October 9, 1995). Please find both the original and revised copy attached to this letter.

Our environmental team has revised the original application pursuant to the above cited Federal Register guidance. While this application is being submitted by the Board of Public Utilities, both the City of Cheyenne and Wyoming Department of Environmental Quality are aware of our intent to submit this revised program. We feel that our community is ready and capable of taking on such a mission, and we wish to be considered for inclusion in the XL Community Pilot program. Should you have questions or desire further information, please advise me at the above address.

Sincerely,

Jerome M. Mark, P.E. & L.S.
Director

JMM/ljs
Enclosures

cc: Bruce Zander, Region VIII EPA
Mayor Leo Pando
Gary Beach, Wyoming Dept. of Environmental Quality
Mark Maxwell, Black & Veatch
Linda Burger, Chugwater Enterprises
Jack Young, BOPU

epal.xl/jer/let

8 pp + 1 att (14 pp)

XL COMMUNITY PILOT PROGRAM FOR CHEYENNE, WYOMING

APPLICANT Cheyenne Board of Public Utilities (BPU)

Attn: Jerome M. Mark, P.E. & L.S., Director

P.O. Box 1469

2100 Pioneer Avenue

Cheyenne, WY 82003

Phone: 307-637-6460

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ENVIRONMENTAL PROBLEMS

Since 1993, the Wyoming Department of Environmental Quality (DEQ), Wyoming Game and Fish Department (GFD), and Cheyenne BPU have collected data to characterize the quality of Crow Creek. The purpose of this effort is to determine if Crow Creek should be reclassified for aquatic life uses above and below the two secondary wastewater treatment plants (WWTPs) that serve 60,000 people in the greater Cheyenne area.

Upstream of Cheyenne, Crow Creek is an intermittent mountain stream. Below Cheyenne, Crow Creek is an intermittent and effluent-dominated watercourse that is designated as a Class 4 stream (irrigation and wildlife watering) by the State of Wyoming. Habitat and water quality in the middle portion of Crow Creek that flows through Warren AFB and Cheyenne is somewhat negatively impacted by runoff from the urban, agricultural, AFB land uses and non-point, and point source impacts, and AFB areas. There are no water treatment plants below the WWTPs.

If Crow Creek below Cheyenne is reclassified for aquatic life, and WWTP effluent ammonia standards are set by the Wyoming DEQ, it is very doubtful whether a balanced fish population can be established. Studies suggest the number, size, and type of fish that might live in lower Crow Creek will be very limited. In addition, there is essentially no public access to Crow Creek below the WWTPs. The capital cost of ammonia removal options range from \$4.7 million (Dry Creek WWTP) to \$9.1 million (both WWTPs). Thus, a very large expenditure will be made in an effort that will provide little or no benefit to the environment or public.

PROJECT DESCRIPTION

The Cheyenne XL Program will improve water quality, aquatic habitat, stream flow, and public access to Crow Creek. The program consists of the following components:

- Community-based public education, household hazardous waste collection, and other pollution prevention programs.
- Phased installation of best management practices (BMPs) on major storm drainages in the greater Cheyenne area.
- Investment of \$1,000,000 by the Cheyenne BPU for habitat, public access, and open space improvements along Crow Creek.
- Implementation of a potable water demand management system by the Cheyenne BPU. This system will substitute non-potable water sources for potable water currently used to irrigate major greenbelt areas in the City.
- Environmental enhancement projects in the upper and middle portions of Crow Creek should help in clean up of the entire creek.
- Evaluation of effectiveness of measures taken.

REGULATORY FLEXIBILITY BEING REQUESTED

The Cheyenne BPU is requesting that the lower segment of Crow Creek remain a Class 4 stream and review of classifications be suspended during the period of installation and evaluation of improvements. It also requests that numeric discharge standards not be imposed on the City's storm drainage outfalls. Public education, pollution prevention,

household hazardous waste collection, and phased BMP programs will be initiated and evaluated for effectiveness in improving Crow Creek.

ANTICIPATED RESULTS

The quality of Crow Creek will improve. Within the upper and middle segments, the stream will become a local asset more accessible to the public. About \$1 million will be invested in projects that will benefit Crow Creek and the people who use it. By not installing ammonia removal at the WWTPs, over \$9.1 million in capital costs and \$419,000 per year in annual costs will be avoided (this will save \$45 per year per customer). The primary benefit will be basin wide management to improve the creek rather than costly but ineffective measures.

I. ENVIRONMENTAL RESULTS

The Cheyenne XL Project will improve water quality aquatic habitat, and public access in sections of Crow Creek. Preliminary identification of program activities in three sections of Crow Creek are described below.

Section 1 (Upper Reach): Crow Creek and Tributaries West of Cheyenne and Warren AFB. This section is characterized by relatively pristine water quality, highly managed flows, and habitat degradation, primarily due to off-road recreational vehicle usage. Opportunities for enhancing fishery habitat and improving public access have been identified. Potential enhancement sites include the North Fork of Crow Creek between the Upper North Crow and North Crow Diversion Reservoirs; Middle Crow Creek near Devil's Playground; South Fork of Middle Crow Creek; Crow Creek near Silver Crown and on the Shellback Ranch; South Crow Creek; and the North Crow Diversion, Granite, Crystal, and Upper North Crow reservoirs.

Further study would identify those sites with the greatest potential for fishery enhancement and public access. These areas will benefit from a variety of improvements such as bank stabilization, flow management, fish habitat structures, controlling off-road vehicles, and fishery management plans. Public access needs at the various sites include bridge replacement, trail development, parking areas, and support facilities. Specific projects would be selected for consistency with watershed management goals for protection of municipal drinking water supplies. While adjoining property at many of the sites is owned by Cheyenne, some private property easement acquisition may be necessary.

Section 2 (Middle Reach): Mainstem of Crow Creek from Warren AFB to the Vicinity of Morrie Avenue. This section supports a stressed, but relatively diverse non-game fish community. Limitations include habitat and water quality degradation, and relatively high temperatures for trout. While flows are perennial, they are frequently only 1 to 2 cfs. Much of the adjoining property in the lower end of this reach is owned by Cheyenne. This segment has the potential for development of a put-and-take brown trout fishery accessible to youth (especially from nearby low income neighborhoods), the elderly, and handicapped persons. On Warren AFB, the stream is accessible to base personnel.

Fish habitat enhancements may include bank stabilization, vegetative cover, and the creation of bank cover, riffles, and pools. The potential for periodic flushing of silt will be evaluated. Water quality problems appear to be primarily due to non-point sources.

Expected water quality improvements include community-based pollution prevention programs, use of non-potable water for park and open space irrigation, and phased installation of BMPs for storm drainage. Public access is currently provided through parks and a trail along parts of the Crow Creek riparian corridor. Enhancement opportunities include additional open space, wetlands treatment for some storm sewer outfalls, and more points of access, including handicapped access. A fishery

management plan will be developed. The XL Program will identify and define those projects with the greatest potential for water quality, habitat, open space, and public access benefits.

Section 3 (Lower Reach): Mainstem of Crow Creek from Morrie Avenue to Wyoming Hereford Ranch Reservoir No. 2 East of Cheyenne. This section is characterized by habitat and water quality degradation, intermittent flows, and sparse non-game fish populations. Adjoining property is nearly all privately owned and the potential for improving public access is very limited. Rehabilitation of this section to support a non-game fishery will require a major capital investment and even then, may not be achieved due to flow conditions. The Cheyenne XL Project is based on placing enhancement resources into the upper and middle reaches of Crow Creek, as described above. It is the upper sections where enhancement is expected to result in significant benefits to the environment and the public. In the lower reach (Section 3), monitoring would determine the effect of upstream improvements on downstream water quality.

II. STAKEHOLDER INVOLVEMENT, SUPPORT, AND CAPACITY FOR COMMUNITY PARTICIPATION.

The Cheyenne XL Project will provide long-term pollution prevention benefits, implementation of BMPs on major storm sewer outfalls, aquatic habitat and open space improvements, and a potable water demand management program whereby non-potable water will be substituted for potable water currently used to irrigate large greenbelt areas. The XL Project will improve the aquatic life and recreational potential of Crow Creek, while effectively utilizing the human and financial resources available in the Cheyenne area.

A local task force will be empaneled to develop, implement, and monitor the performance of specific environmental enhancement projects. The Cheyenne area has the necessary human and institutional resources for planning, financing, design, implementation, and management of specific projects. The task force will solicit public input in defining the community's environmental goals and financial commitments. Several local groups such as Trout Unlimited and Ducks Unlimited have committed to participate in environmental enhancement projects.

Potential XL Project participants, and the type of resources they can offer to the program, are listed below:

General Public: ideas, support, and volunteer labor.

Cheyenne BPU: planning, engineering, financing.

City of Cheyenne: planning, engineering, stormwater expertise, NPS programs.

Laramie County: planning.

USGS: data source and plan review.

USSCS: plan review, habitat funding, trees.

Wyoming DEQ: regulatory oversight, water quality and biological monitoring.

Wyoming GFD: habitat expertise, consultation.

USCOE: regulatory oversight, 404 permitting.

Warren AFB: data source, in-kind participation.

Wyoming Parks and Cultural Resources: planning, consultation.

Local Environmental Groups: expertise, funding, volunteer labor.

School System: education and communication.

Media: communication with general public.

The people of Cheyenne are the primary stakeholders since they have the most to gain and will finance most or all of the cost for enhancement projects that are completed. They will benefit from the improved environment in and along Crow Creek, more effective use of funds invested in stream improvement.

III. ECONOMIC OPPORTUNITY

The Cheyenne XL Project will enhance economic opportunity along the Crow Creek corridor, both within and upstream of the City.

The implementation of pollution prevention, household hazardous waste collection, and stormwater BMPs practices will improve Crow Creek water quality within Cheyenne. This will encourage expanded public use of the Crow Creek greenbelt corridor.

The City and County can enhance the peoples' recreational experience by building more trails and support facilities, plus additional public access points. These projects may entail the acquisition of right-of-way and some land. Aquatic habitat can also be improved in the upper and middle stream reaches (Sections 1 and 2). This can be done through such mechanisms as:

- Reservoir releases to scour and renew the stream channel.
- Rework of the channel to create more riffles and pools.
- Stabilization of eroding stream banks.
- Planting of willow and other low-growing vegetative species to create cover along the stream banks.
- Construction of detention ponds and wetlands at select locations to treat urban stormwater runoff. These facilities can be sited at the confluence of major storm sewer outfalls and the Crow Creek greenbelt corridor.

There will be increased economic activity by means of the stream and greenbelt corridor improvements. New or expanded recreational support businesses, and associated sales taxes, will be created. Adjacent property values will increase, benefiting the real estate market.

Finally, with Crow Creek as a local amenity, summer tourists will be inclined to stay longer and spend more money in the Cheyenne area. Increasing tourism, and the economic stimulus it provides, is important to the Cheyenne area.

IV. FEASIBILITY

The concept of improving aquatic and recreational opportunities along Crow Creek, in lieu of more expensive and less effective "end-of-pipe" solutions, was explored during the recently-completed 201 Wastewater Facility Planning Process. This 1993-1995 study effort included:

- Documentation of current stream conditions with respect to water quality, aquatic biology, and pollution sources. This work was performed as a cooperative effort by several State agencies and the Cheyenne BPU.
- Evaluation of specific locations where stream habitat and access could be improved to enhance fisheries and fishing opportunities.

Over the last 3 years, State and local agencies have searched for a community-based approach to resolving several interrelated environmental issues. The parties have met during this period and are willing to work out appropriate and common sense solutions to local problems. What is needed is a flexible regulatory tool that will empower the City, State, Cheyenne BPU, environmental groups, and the general public to forge an environmental improvement program on a watershed basis.

V. TRANSFERABILITY

The concepts presented in the Cheyenne XL proposal can be applied throughout the semi-arid west where many streams flow only intermittently. The lack of sustained streamflow can be due to natural conditions or local, State, or Federal water projects. Such streams may be "effluent dominated" and/or with rigidly constructed channels. The watershed approach allows for addressing a variety of ecological barriers to fisheries and their enjoyment by the public, rather than focusing on water quality impairment from point source pollution.

In these situations, communities should be able to target funds to those projects where the greatest environmental benefit will be gained. Each community will have unique set of concerns that can be resolved through consensus-building and negotiation. EPA is using the negotiated rule-making approach in the development of certain Safe Drinking Water Act rules. Why not let communities and the State primacy agency use a similar approach when a traditional compliance approach will result in an ineffective use of limited funds?

EPA can prevent any "excesses" from occurring through its oversight of the primacy agency. In addition, citizen lawsuits can be filed through authorization provided in the Clean Water Act. This will make sure that the participants have broad public support for the creative initiative they undertake.

VI. MONITORING, REPORTING, AND EVALUATION.

The Cheyenne XL Project envisions a broad-based effort to include local and State government agencies, Warren AFB, industries, and community groups, with opportunity for general public input. Before specific, measurable objectives can be defined, a task force will be convened to oversee the Cheyenne XL Project. Extensive water quality, fish survey, habitat, and hydrologic investigations have been conducted over the last few years in a cooperative effort by State and local agencies. The factual basis from which to proceed is in place, and areas requiring further investigation can be readily identified.

The task force can be quickly mobilized following EPA approval of the Cheyenne XL proposal. It is anticipated that 1 to 2 years will be required to develop specific projects from the ideas and options that have been identified in preliminary studies. A description of selected projects, an implementation schedule, funding sources, cash flow projection, monitoring strategies, and identification of the agency accountable for installation will be developed by the task force and reported to EPA and the Wyoming DEQ. Installation of selected projects will likely be phased over a period of several years.

Cheyenne BPU and Warren AFB will be accountable for funding and installation of improvements in their jurisdictions. Monitoring of results is anticipated to be a cooperative effort by the City of Cheyenne (public access, open space, pollution prevention, and storm sewers), the Cheyenne BPU (installation of improvements, water quality monitoring), the Wyoming DEQ (water quality and benthic invertebrate monitoring) and the Wyoming Game and Fish Department (fish surveys). Comparative data will be reported to EPA through Wyoming DEQ at annual intervals.

The City and Cheyenne BPU will maintain records on habitat improvements, public access facilities, open space additions, and raw water irrigation projects. These will be reported annually in terms of stream miles enhanced, acres of open space protected or made accessible to the public, acres irrigated with non-potable water, acres of reservoir pools with habitat enhancements, and project summaries of completed public facilities.

Documents describing the fishery management plans, off-road vehicle usage plans, pollution prevention plans, and water management plans that may be developed will be provided annually by the implementing agency as they are completed. This includes project summaries for storm sewer BMP installations.

The general public and task force will routinely exchange information regarding program goals and results. The precise form and schedule for such communication events will be mutually determined by the general public and the task force.

VII. EQUITABLE DISTRIBUTION OF ENVIRONMENTAL RISKS

There will be no increase in pollution nor a transfer of environmental risk to any other group. There will be no cross media transfer of pollution from water to air or land. The two WWTPs that discharge to Crow Creek will continue to meet secondary treatment standards, as they have since 1990.

Downstream irrigators will, in fact, see an improvement in water quality. This will occur as pollution prevention and stormwater management initiatives are implemented by the City and Cheyenne BPU.

VIII. COMMUNITY PLANNING

The community has demonstrated a strong desire to enhance the condition of Crow Creek as it flows through the western and southern areas of the City. In 1990, Cheyenne voters approved a sales tax increase (i.e. Capital Facilities Tax) which raised funds for, among other projects, a greenway/bike path system. These funds, which were matched by both public and private sources, were used to develop approximately five miles of greenway along Crow Creek.

The City, using both public and private funds, paid and volunteer workers, has reclaimed an area adjacent to Crow Creek, which was once an unapproved dump ground for junk cars and appliances, was turned into a park with walkways, greenbelt open space, stream viewing areas, tennis courts and wildlife habitat areas. Goose nesting areas on Dry Creek and the installation of a handicapped accessible fishing pier are other examples of volunteer projects the public has undertaken.

In each of the last four years, hundreds of volunteers have labored to clean up, replant and maintain Crow Creek as it flows through town. On Earth Day, the Wyoming DEQ and GFD conduct hands-on demonstrations regarding the ecosystems along the Crow Creek corridor.

Another Capital Facilities Tax is in the offing, with proposals for more greenway, bike paths, and enhanced habitat areas near Crow Creek. A museum association is entering the planning phase of a multimillion dollar project that will address, in part, a ground water quality problem that negatively impacts the stream. The City, Cheyenne BPU, and the Wyoming Department of Transportation anticipate major street and utility repair projects in this area as well.

Consistent with the long-term goals of many public and private community groups, the Cheyenne XL Project will provide environmental enhancement benefits that will not be possible if traditional, and more expensive "end-of-pipe" solutions are implemented in response to specific mandates from EPA and the Wyoming DEQ.

The above descriptions do not adequately convey the enthusiasm that private citizens and City, County, and State administrators have for enhancing the quality of life in this community, which is the capital of Wyoming and the seat of these governmental agencies.

IX. INNOVATIVE APPROACHES/MULTI-MEDIA FOCUS/POLLUTION PREVENTION

The Cheyenne XL Project represents an innovative process in bringing together potentially adversarial agencies and groups into a cooperative framework to develop a community vision for the Crow Creek Basin. It represents a departure from traditional environmental management and regulation by taking a basin-wide view of threats to Crow Creek, and the potential for prevention and correction.

Specific project components will be selected based on the magnitude of the ecological benefit to be gained, consistency with the community vision, recreational benefits, and cost-effectiveness of enhancements in relation to the degree of benefit to be gained. The Cheyenne XL Project represents a multi-media enhancement of the watershed rather than isolated, less effective measures to correct environmental degradation.

Through pollution prevention, education, and communication initiatives, plus community representation on the task force, the XL Project will generate increased public awareness and individual responsibility for environmental quality. Programs for involving public schools and community youth organizations will be explored. Groups such as the Groundwater Foundation have developed K-12 curricula regarding wellhead and watershed protection. These teaching tools could be locally tailored to include the pollution prevention initiatives developed by the task force.

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